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W.O. Atwater Memorial Lecture

U.S. Department of Agriculture
Agricultural Research Service



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FOODS, VITAMINS AND POLICY: THE FOLATE CASE



Dr. Irwin H. Rosenberg
1994 W.O. Atwater Memorial Lecture
Agricultural Research Service
United States Department of Agriculture

Cosponsored by
Institute of Food Technologists

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The annual W.O. Atwater Memorial Lectureship was established by the Agricultural Research Service in 1968 to honor the memory of a great scientist by recognizing scientists who have made unique contributions toward improving the diet and nutrition of people around the world.



Wilbur Olin Atwater (1844-1907), USDA's first chief of nutrition investigations, was the foremost pioneer in nutrition research and education in the United States. He is generally considered the father of modern human nutrition in this country because of his research on nutrients, proteins, and food composition.



Candidates may be suggested for the Lectureship each year in January by sending a letter of nomination and a current curriculum vitae to Lecture Coordinator, ARS Information Staff, 6303 Ivy Lane, Greenbelt, MD 20770. An impartial committee rates all nominees and then a final selection is made by the ARS administrator.



The Agricultural Research Service, the principal scientific research agency of the U.S. Department of Agriculture, has a responsibility to develop knowledge and technology for the benefit of farmers and consumers. This responsibility includes promoting optimum human health and well-being through improved nutrition and increasing our understanding of nutritional requirements and how foods can supply them.



This year's cosponsor for the W.O. Atwater Memorial Lecture is the Institute of Food Technologists, a professional scientific society devoted to improving the world's foods through the discovery of new knowledge and the application of existing knowledge. The society's 25,000 members are active in industry, academics, and government.



rwinn H. Rosenberg is an internationally recognized leader in nutrition science who has made important and unique contributions to our understanding of nutrition metabolism in health and disease. He is currently the Jean Mayer Professor in Nutrition, Physiology, and Medicine at Tufts University and director of the USDA Human Nutrition Research Center on Aging at Tufts.

Prior to joining Tufts, Dr. Rosenberg held faculty positions at Harvard Medical School and the University of Chicago, where he served as the first director of the Clinical Nutrition Research Center.

As a clinical nutrition investigator, he has helped develop a nutritional focus within the field of gastroenterology. Dr. Rosenberg was among the first to apply new techniques in nutritional therapeutics in the management of patients with inflammatory bowel diseases and severe malabsorption.

Early in his professional career, he served as director of the Nutritional Survey of East Pakistan, which remains one of the largest and most comprehensive survey of its kind. He was one of the co-founders of the clinical research program at the Cholera Research Laboratory, where he participated in the first studies on the effects of host nutritional status on susceptibility to cholera.

Dr. Rosenberg's primary research interest during the last two decades has been in the area of folate metabolism, including the mechanism of intestinal deconjugation and absorption of folates. His work led to the isolation of pteroylpolyglutamate hydrolase from the intestine of experimental animals and the elucidation of its mechanism of action. His interest in clinical

investigation has also prompted a collaboration with the Argonne National Laboratory in which deuterium-labeled folate was synthesized for use in studying the intestinal absorption and metabolism of folate.

Recently, he has been exploring ways to better assess vitamin intake and status in older people and the question of folate supplementation for women of childbearing age. The work of his laboratory on the relationship of folate status and blood homocysteine and vascular disease has helped to redefine the diet-heart hypothesis.

Among his many honors are the Josiah Macy Faculty Award, Grace Goldsmith Award (American College of Nutrition), Robert H. Herman Memorial Award (American Society of Clinical Nutrition), and the Jonathan B. Rhoads Award of the American Society for Parenteral and Enteral Nutrition.



PREVIOUS LECTURERS

1993, Kenneth J. Carpenter, Distinguished Scholar, University of California, Berkeley.

1992, James A. Olson, Professor of Biochemistry and Biophysics, Iowa State University.

1991, R. Gaurth Hansen, Distinguished Provost Emeritus and Distinguished Professor Emeritus of Nutrition and Food Sciences and Biochemistry, Utah State University.

1990, Alfred E. Harper, E.V. McCollum Professor of Nutrition, University of Wisconsin.

1989, Helen A. Guthrie, Professor and Head, Nutrition Department, The Pennsylvania State University.

1988, John E. Kinsella, Liberty Hyde Bailey Professor of Food Chemistry and General Foods Distinguished Professor of Food Science, Cornell University.

1987, Malden C. Nesheim, Director, Division of Nutrition, Cornell University.

1986, **Elsie Widdowson**, Department of Medicine, Addenbrooke's Hospital, Cambridge, England.

1985, **Mark Hegsted**, Professor of Nutrition, New England Regional Primate Research Center.

1984, **Harold H. Sandstead**, Director, North Atlantic Area, Human Nutrition Research Center on Aging at Tufts University.

1983, **George H. Beaton**, Professor of Nutrition Science, Faculty of Medicine, University of Toronto.

1982, **Edwin M. Foster**, Director, Food Research Institute, University of Wisconsin.

1981, **Joaquin Cravioto**, Professor of Pediatrics and Scientific Director, National Institute for Children's Health Sciences and Technology, Mexico City.

1980, **Ancel Keys**, Professor, Division of Epidemiology, University of Minnesota.

1979, **Hector F. DeLuca**, Professor, Department of Biochemistry, University of Wisconsin.

1978, **Robert E. Olson**, Professor, Department of Biochemistry, St. Louis University.

1977, **Nevin S. Scrimshaw**, Institute Professor and Head of the Department of Nutrition and Food Science, Massachusetts Institute of Technology.

1976, **Emil M. Mrak**, Chancellor Emeritus, University of California at Davis.

1975, **William J. Darby**, President, The Nutrition Foundation, Inc.

1974, **J. George Harrar**, President Emeritus, Rockefeller Foundation.

1973, **Marina N. Whitman**, Professor of Economics, University of Pittsburgh.

1971, **Jean Mayer**, Professor of Nutrition and Lecturer on the History of Public Health, Harvard University.

1970, **Philip Handler**, President, National Academy of Sciences, and Chairman of the National Research Council.

1969, **Albert Szent-Gyorgyi**, Director, Institute for Muscle Research, Marine Biological Laboratory, Woods Hole, Massachusetts.

1968, **Artturi I. Virtanen**, Director, Biochemical Research Institute, Helsinki, Finland.

